



**ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
JULY 16, 2001 - 1:30 P.M.
EXECUTIVE CONFERENCE ROOM**

Present: C. T. Maki J. D. Culp J. D. O'Doherty
T. E. Davies J. W. Reincke T. Fudaly
S. Bower

Guests: K. Kennedy M. VanPortFleet B. Lower
J. T. LaVoy

OLD BUSINESS

1. Approval of the Minutes of the June 7, 2001, Meeting - C. T. Maki

Minutes of the June 7, 2001, meeting were approved as amended:

NEW BUSINESS, Item 4 - Pavement Acceptance - Paragraph 2

The department developed pavement acceptance specifications with both paving industries in 1998 and 1999 to be used on warranty projects. These specifications objectively define what pavement condition must exist before acceptance can occur on a project. The pavement acceptance specification provides a much clearer understanding to all project personnel as to what pavement condition is acceptable at "initial acceptance for open to traffic", which marks the official start of the warranty period.

2. Longitudinal Tining and Longitudinal Profile Grinding - J. D. Culp

Other states have implemented longitudinal tining and profile grinding as an effective means to reduce the tire generated noise on concrete pavements. The results from a recent Colorado study indicate a 7 dBA reduction over a transverse tined pavement concluded that "the current standard surface finish for concrete pavement (longitudinal tining) resulted in comparable noise level values to the ground surface and the 3/8 inch SMA asphalt surfacing." A 6 dBA reduction was achieved by grinding the transverse tining pattern out, which is similar to the results reported by Wisconsin.

The department should explore using these techniques on projects in noise sensitive areas. Tom Fudaly noted that FHWA has no problem with these treatments, as it is the state's decision. He will check with his FHWA counterparts in Iowa and Colorado to gain their perspective with these surface treatments.

ACTION: EOC desires to pilot some jobs in 2002 that involve concrete paving in noise sensitive locations. The regions will be asked to identify potential projects for this pilot study. The Construction and Technology Division will document the “before and after” noise levels. Note that at least one 2001 project will compare the tire noise on longitudinal tining and transverse tining.

3. **Improving Aggregate Quality in Concrete - J. D. Culp**

The proposed strategy for improving aggregate quality in concrete was given to the director on June 13, 2001. At this time, a subcommittee of EOC is being established to continue the development of this strategy and to ensure continued improvement in aggregate quality standards. The industry will be brought into the subcommittee’s meetings, as appropriate, to discuss the case for improving pavement performance through enhanced quality materials.

The subcommittee membership will be as follows:

- | | |
|------------------------|---------------------------|
| •Tom Maki, Chairperson | •Steve Bower |
| •Jim Culp | •Ryan Rizzo, FHWA |
| •Dave Smiley | •Steve Earl, Grand Region |
| | •Bob Ranck, Bay Region |

Tom Maki will schedule the first meeting in the future.

NEW BUSINESS

1. **Pavement Selection, Northbound US-24 Reconstruction: CS 82053, JN 45693 - *Flexible Bituminous Pavement Selection* - K. Kennedy**

The reconstruction alternates considered were a flexible bituminous pavement (Alternate 1) and a jointed reinforced concrete pavement (Alternate 2).

A life cycle cost analysis was performance and Alternate 1 was approved based on having the lowest Equivalent Uniform Annual Cost. The pavement design and cost analysis summary are as follows:

Alternate 1A (48.7 Percent of the Project) Reconstruct: Flexible Bituminous Pavement (Ex. 3.6 m Concrete Lanes)

48mm	Bituminous Mix 5E10, Top Course (Mainline)
63mm	Bituminous Mix 4E10, Leveling Course (Mainline)
101mm	Bituminous Mix 3E10, Base Course (Mainline)

160mm Aggregate Base
 460mm Sand Subbase
 150mm Subbase Underdrains
 832mm Total Thickness

Alternate 1B (51.2 Percent of the Project) Reconstruct: Flexible Bituminous Pavement (Ex. 3.35 m Composite Lanes)

48mm Bituminous Mix 5E10, Top Course (Mainline)
 63mm Bituminous Mix 4E10, Leveling Course (Mainline)
 101mm Bituminous Mix 3E10, Base Course (Mainline)
 160mm Aggregate Base
 460mm Sand Subbase
 150mm Subbase Underdrains
 832mm Total Thickness

Present Value Initial Construction Costs \$451,039/directional kilometer
 (Composite Cost of 1A and 1B)

Present Value Initial User Costs \$103,609/directional kilometer

Present Value Maintenance Costs \$125,396/directional kilometer

Equivalent Uniform Annual Cost \$43,481/directional kilometer

(Signed Copy on File at C&T)
 Jon W. Reincke, Secretary
 Engineering Operations Committee

JWR:kat

cc: EOC Members

Region Engineers

G. J. Rosine	R. J. Risser, Jr. (MCPA)	L. Stornant	T. L. Nelson
R. J. Lippert, Jr.	A. C. Milo (MRBA)	J. Ruszkowski	R. D. Till
D. L. Smiley	J. Becsey (MAPA)	C. Libiran	M. Frierson
M. Nystrom (AUC)	D. Hollingsworth (MCA)	G. J. Bukoski	C. W. Whiteside
M. Newman (MAA)	J. Steele (FHWA)	K. Rothwell	T. E. Myers
J. Murner (MRPA)	K. Peters	T. Phillips	